

Division of Materials and Tests

TDOT Certification: Hot Mix Asphalt Certification Program

Course Title: Asphalt Concrete Mix Design Methods

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Course Description

A Certified Asphalt Mix Designer should demonstrate proficiency in Hot Mix Asphalt Design and Submittal including an understanding of AASHTO/ASTM Test Methods and TDOT Specifications.

Scope of Course

The course provides an overview of Hot Mix Asphalt, Design Submittal, volumetric calculations, and the following AASHTO and ASTM Test Methods:

- AASHTO T 2 – Standard Practice for Sampling Aggregates
- AASHTO T 11 – Materials Finer Than No. 200 Sieve in Mineral Aggregates by Washing
- AASHTO T 27 – Sieve Analysis of Fine and Coarse Aggregates
- AASHTO T 84 – Specific Gravity and Absorption of Fine Aggregate
- AASHTO T 85 – Specific Gravity and Absorption of Coarse Aggregate
- AASHTO T 166 – Bulk Specific Gravity of Compacted Bituminous Mixtures Using Saturated Surface-Dry Specimens
- AASHTO T 176 – Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test
- AASHTO T 209 – Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
- AASHTO T 245 – Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus
- AASHTO T 248 – Reducing Samples of Aggregate to Testing Size
- AASHTO T 304 – Uncompacted Void Content of Fine Aggregate
- AASHTO T 308 – Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method
- AASHTO TP 4 – Standard Method for Preparing and Determining the Density of Hot Mix Asphalt (HMA) Specimens by Means of the Superpave Gyratory Compactor
- ASTM D 4867 – Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixture
- * ASTM D 4791 – Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
- * TDOT Test Method for Glassy Particles in Slag
- * TDOT Test Method for Fractured Face Count for Marshall Mixes
- * TDOT Test Method for Loss on Ignition for Surface Mixes
- * TDOT Test Method for Ten Minute Boil Test for Anti-stripping Dosage Rate

Prerequisites

Completion of TDOT Asphalt Concrete Plant Technician Course

Supervisor's approval and written recommendation

A general knowledge of asphalt mix design

Familiarity with applicable TDOT Standard Specifications, Supplemental Specifications, and Special Provisions

Certification Requirements

TDOT will grant a 5 year certification only to those applicants who meet the following requirements:

- Attendance of the 5-day course in its entirety
- Successful completion of two - 3 hour examinations (Test Methods & Specifications) with a passing score of 70% or above on each exam. (Both exams are OPEN BOOK and consist of true/false, multiple choice and word problems)
- Demonstration of his/her abilities to Regional Materials & Tests Personnel.

Recertification Requirements

- Must attend a ½ day seminar/workshop for updates of any changes to specifications and test methods since acquiring certification.
- Must re-demonstrate within one year of ½ day seminar/workshop to maintain certification.

Study Materials

A Mix Design Manual is distributed at the beginning of the 5-day course. This manual contains all the information a technician will need to successfully complete his/her certification.

How to Register

NOTICES

- Cheating on any level of the exam **WILL NOT BE TOLERATED** and will result in immediate expulsion from the course and notification to superiors.
 - THE USE OF CELL PHONE CALCULATORS **WILL NOT** BE PERMITTED DURING EXAM
 - A VALID **PHOTO I.D. IS REQUIRED** UPON CHECK-IN